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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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## Complete if Known

Application Number	10/581,580
Filing Date	June 2, 2006
First Named Inventor	Shyam S. Mohapatra
Art Unit	1648
Examiner Name	Myron G. Hill
Attorney Docket Number	USF-208TCXC1

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
	U1	US-2005/0159385 A1	07-21-2005	Mohapatra	All
	U2	US-2005/0158327 A1	07-21-2005	Mohapatra et al.	All
	U3	US-2004/0175384 A1	09-09-2004	Mohapatra et al.	All
	U4	US-2004/0029275 A1	02-12-2004	Brown et al.	All
	U5	US-2004/0023390 A1	02-05-2004	Davidson et al.	All
	U6	US-2004/0019001 A1	01-29-2004	McSwiggen	All
	U7	US-2004/0002458 A1	01-01-2004	Seilhamer et al.	All
	U8	US-2004/0018176 A1	01-29-2004	Tolentino et al.	All
	U9	US-2003/0198624 A1	10-23-2003	Mohapatra et al.	All
	U10	US-2003/0190635 A1	10-09-2003	McSwiggen	All
	U11	US-2003/0175950 A1	09-18-2003	McSwiggen	All
	U12	US-2003/0175772 A1	09-18-2003	Wang	All

## FOREIGN PATENT DOCUMENTS

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		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
	F1	WO 03/028759 A1	04-10-2003	University of South Florida; John Hopkins University	All	
	F2	WO 03/070918 A2	08-28-2003	Ribozyme Pharm, Inc	All	
	F3	WO 2004/074314 A2	09-02-2004	University of South Florida	All	
	F4	WO/2007/127480	11-08-2007	University of South Florida	All	

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	U13	US-2003/0170891 A1	09-11-2003	McSwiggen	All
	U14	US-2003/0166282 A1	09-04-2003	Brown <i>et al.</i>	All
	U15	US-2003/0157691 A1	08-21-2003	Qin <i>et al.</i>	All
	U16	US-2003/0148519 A1	08-07-2003	Engelke <i>et al.</i>	All
	U17	US-2003/0143732 A1	07-31-2003	Fosnaugh <i>et al.</i>	All
	U18	US-2003/0139363 A1	07-24-2003	Kay <i>et al.</i>	All
	U19	US-2002/0173478 A1	11-21-2002	Gewirtz	All
	U20	US-2006/0276382 A1	12-07-2006	Mohapatra	All
	U21	US-2008/0070858 A1	03-20-2008	Mohapatra	All
	U22	US-2007/0116767 A1	05-24-2007	Mohapatra <i>et al.</i>	All
	U23	US-2005/0266093 A1	12-01-2005	Mohapatra	All
	U24	US-2005/0272650 A1	12-08-2005	Mohapatra	All
	U25	US- 2007/0265204 A1	11-15-2007	Mohapatra <i>et al.</i>	All

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	F5	WO 2007/127487	11-08-2007	University of South Florida	All	
	F6	WO 2005/105136	11-10-2005	University of South Florida	All	
	F7	WO 2005/094420	10-13-2005	University of South Florida	All	
	F8	WO 03/092618	11-13-2003	University of South Florida	All	

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Art Unit	1648
Examiner Name	Myron G. Hill
Attorney Docket Number	USF-208TCXC1

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	U26	US-2008/0075731 A1	03-27-2008	Mohapatra <i>et al.</i>	All
	U27	US-2008/0100279 A1	05-01-2008	Mohapatra <i>et al.</i>	All
	U28	US-2008/0023325 A1	1-31-2008	Mohapatra <i>et al.</i>	All
	U29	US-2007/0009951 A1	1-11-2007	Mohapatra <i>et al.</i>	All
	U30	US-2006/0239971 A1	10-26-2006	Mohapatra <i>et al.</i>	All
	U31	US-7,118,888	10-10-2006	Mohapatra <i>et al.</i>	All
	U32	US-6,489,306	12-03-2002	Mohapatra <i>et al.</i>	All
	U33	US-7,354,908	04-08-2008	Mohapatra <i>et al.</i>	All
	U34	US-6,900,299	05-31-2005	Mohapatra <i>et al.</i>	All
	U35	US-5,998,602	12-07-1999	Torrence <i>et al.</i>	All
	U36	US-10/655,873	09-05-2003	Mohapatra <i>et al.</i> (patent application)	All
	U37	US-			
	U38	US-			

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Application Number	10/581,580
Filing Date	June 2, 2006
First Named Inventor	Shyam S. Mohapatra
Group Art Unit	1648
Examiner Name	Myron G. Hill
Attorney Docket Number	USF-208TCXC1

## NON PATENT LITERATURE DOCUMENTS

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	R1	ADELMAN, Z.N. <i>et al.</i> "RNA silencing of dengue virus type 2 replication in transformed C6/36 mosquito cells transcribing an inverted-repeat RNA derived from the virus genome" <i>J. Virology</i> , 2002, 76:12925-12933.	
	R2	ADELMAN, Z.N. <i>et al.</i> "Sindbis virus-induced silencing of dengue viruses in mosquitoes" <i>Insect Mol Biol.</i> , 2001, 10:265-273.	
	R3	ABBAS-TERKI, T. <i>et al.</i> "Lentiviral-mediated RNA interference" <i>Human Gene Therapy</i> , 2002, 13:2197-2201.	
	R4	BANCHEREAU, J. and STEINMAN, R.M. "Dendritic cells and the control of immunity" <i>Nature</i> , 1998, 392:245-252.	
	R5	BLAIR, C.D. <i>et al.</i> "Molecular strategies for interrupting arthropod-borne virus transmission by mosquitoes" <i>Clin Microbiol Rev</i> , 2000, 13:651-661.	
	R6	BUELER, H. "Adeno-associated viral vectors for gene transfer and gene therapy" <i>Biol Chem</i> , 1999, 380:613-622, abstract.	
	R7	CAPLEN, N. <i>et al.</i> "Specific inhibition of gene expression by small double-stranded RNAs in invertebrate and vertebrate systems" <i>Proc. Natl. Acad. Sci. USA</i> , 2001, 98:9742-9747.	
	R8	CAPLEN, N.J. <i>et al.</i> "Inhibition of viral gene expression and replication in mosquito cells by dsRNA-triggered RNA interference" <i>Mol Ther</i> , 2002, 6:243-251.	
	R9	ELBASHIR, S.M. <i>et al.</i> "Duplexes of 21-nucleotide RNAs mediate RNA interference in cultured mammalian cells" <i>Nature</i> , 2001, 411:494-498.	
	R10	FIRE, A. "RNA-triggered gene silencing" <i>Trends Genet.</i> , 1999, 15:358-363.	
	R11	HAMMOND, S.M. <i>et al.</i> "Argonaute2, a link between genetic and biochemical analyses of RNAi" <i>Science</i> , 2001, 293:1146-1150.	
	R12	HO, L.J. <i>et al.</i> "Infection of human dendritic cells by dengue virus causes cell maturation and cytokine production" <i>J Immunol</i> , 2001, 166:1499-1506.	
	R13	HUTVAGNER, G. <i>et al.</i> "A cellular function for the RNA-interference enzyme dicer in the maturation of the let-7 small temporal RNA" <i>Science</i> , 2001, 293:834-838.	

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	R14	ILVES, H. et al. "Retroviral vectors designed for targeted expression of RNA polymerase III-driven transcripts: a comparative study" <i>Gene</i> , 1996, 171:203-208.	
	R15	KAY, M.A. et al. "Viral vectors for gene therapy: the art of turning infectious agents into vehicles of therapeutics" <i>Nature Med</i> , 2001, 7:33-40.	
	R16	LIBRATY, D.H. et al. "Human dendritic cells are activated by dengue virus infection: enhancement by gamma interferon and implications for disease pathogenesis" <i>J Virol</i> , 2001, 75:3501-3508.	
	R17	LUDEWIG, B. et al. "Protective antiviral cytotoxic T cell memory is most efficiently maintained by restimulation via dendritic cells" <i>J Immunol</i> , 1999, 163:1839-1844.	
	R18	MAROVICH, M. et al. "Human dendritic cells as targets of dengue virus infection" <i>J Invest Dermatol Symp Proc</i> , 2001, 6:219-224.	
	R19	MEN, R. et al. "Dengue type 4 virus mutants containing deletions in the 3' noncoding region of the RNA genome: analysis of growth restriction in cell culture and altered viremia pattern and immunogenicity in Rhesus monkeys" <i>J Virol</i> , 1996, 70:3930-3937.	
	R20	PAUL, C.P. et al. "Effective expression of small interfering RNA in human cells" <i>Nature Biotech.</i> , 2002, 20:505-508.	
	R21	PONNAZHAGAN, S. et al. "Adeno-associated virus type 2-mediated transduction of human monocyte-derived dendritic cells: implications for ex vivo immunotherapy" <i>J Virol</i> , 2001, 75:9493-9501.	
	R22	PROUTSKI, V. et al. "Secondary structure of the 3' untranslated region of flaviviruses: similarities and differences" <i>Nucleic Acids Res</i> , 1997, 25:1194-1202.	
	R23	PROVOST, P. et al. "Ribonuclease activity and RNA binding of recombinant human Dicer" <i>Embo J</i> , 2002, 21:5864.	
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	R26	SRIVASTAVA, A. "Obstacles to human hematopoietic stem cell transduction by recombinant adeno-associated virus 2 vectors" <i>J Cell Biochem Suppl</i> , 2002, 38:39-45.	

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	R27	STÄMPFLI, M.R. <i>et al.</i> "GM-CSF transgene expression in the airway allows aerosolized ovalbumin to induce allergic sensitization in mice" <i>J Clin Invest</i> , 1998, 102:1704-1714.	
	R28	STARK, G.R. <i>et al.</i> "How cells respond to interferons" <i>Annu Rev Biochem</i> , 1998, 67:227-264.	
	R29	TUSCHL, T. "Expanding small RNA interference" <i>Nature Biotechnol.</i> , 2002, 20:446-448.	
	R30	VAUGHN, D.W. <i>et al.</i> "Dengue in the early febrile phase: viremia and antibody responses" <i>J Infect Dis</i> , 1997, 176:322-330.	
	R31	WALTER, D.M. <i>et al.</i> "IL-18 gene transfer by adenovirus prevents the development of and reverses established allergen-induced airway hyperreactivity" <i>J Immunol</i> , 2001, 166:6392-6398.	
	R32	WU, S.J. <i>et al.</i> "Human skin Langerhans cells are targets of dengue virus infection" <i>Nature Med</i> , 2000, 6:816-820.	
	R33	ZAISS, A.K. <i>et al.</i> "Differential activation of innate immune responses by adenovirus and adeno-associated virus vectors" <i>J Virol</i> , 2002, 76:4580-4590.	
	R34	BEHERA, A.K. <i>et al.</i> "Adenovirus mediated interferon $\gamma$ gene therapy for allergic asthma: Involvement of interleukin 12 and STAT4 signaling" <i>Hum. Gene Ther.</i> , 2002, pp. 1697-1709, Vol. 13.	
	R35	BEHERA, A.K. <i>et al.</i> "2'-5' oligoadenylate synthetase plays a critical role in interferon- $\gamma$ inhibition of respiratory syncytial virus infection of human epithelial cells" <i>J. Biol. Chem</i> , 2002, pp. 25601-25608, Vol. 277, No. 28.	
	R36	BOSSERT, B. <i>et al.</i> "Respiratory syncytial virus (RSV) Nonstructural (NS) protein as host range determinants: A chimeric bovine RSV with NS genes from human RSV is attenuated in interferon-competent bovine cells" <i>J. Virol.</i> , 2002, pp. 4287-4293, Vol. 76, No. 9.	
	R37	BOSSERT, B. <i>et al.</i> "Nonstructural proteins NS1 and NS2 of bovine respiratory syncytial virus block activation of interferon regulatory factor 3" <i>J. Virol.</i> , 2003, pp. 8661-8668, Vol. 77, No. 16.	
	R38	DORN, G. <i>et al.</i> "siRNA relieves chronic neuropathic pain" <i>Nucleic Acids Res.</i> , 2004, pp. e49, Vol. 32.	
	R39	HALLAK, L.K. <i>et al.</i> "Iduronic acid-containing glycosaminoglycans on target cells are required for efficient respiratory syncytial virus infection" <i>Virology</i> , 2000, pp. 264-275, Vol. 271.	

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			Application Number	10/581,580	
			Filing Date	June 2, 2006	
			First Named Inventor	Shyam S. Mohapatra	
			Group Art Unit	1648	
			Examiner Name	Myron G. Hill	
Sheet	7	of	9	Attorney Docket Number	USF-208TCXC1

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
	R40	HELLERMANN, G. <i>et al.</i> "Genetic therapy: on the brink of a new future" <i>Genetic Vaccines and Ther.</i> , 2003, pp. 1-3, Vol. 1.			
	R41	JAIRATH, S. <i>et al.</i> "Inhibition of respiratory syncytial virus replication by antisense oligodeoxyribonucleotides" <i>Antiviral Res.</i> , 1997, 33:201-213.			
	R42	JIN, H. <i>et al.</i> "Recombinant respiratory syncytial viruses with deletions in the NS1, NS2, SH, and M2-2 genes are attenuated <i>in vitro</i> and <i>in vivo</i> " <i>Virology</i> , 2000, pp. 210-218, Vol. 273.			
	R43	KUMAR, M. <i>et al.</i> "Chitosan IFN- $\gamma$ -pDNA nanoparticles (CIN) therapy for allergic asthma" <i>Genetic Vaccines and Ther.</i> , 2003, pp. 3, Vol. 1.			
	R44	KUMAR, M. <i>et al.</i> "Intranasal gene transfer by chitosan-DNA nanospheres protects BALB/c mice against acute respiratory syncytial virus infection" <i>Human Gene Ther.</i> , 2002, pp. 1415-1425, Vol. 13.			
	R45	KUMAR, M. <i>et al.</i> "Intranasal IFN- $\gamma$ gene transfer protects BALB/c mice against respiratory syncytial virus infection" <i>Vaccine</i> , 1999, pp. 558-567, Vol. 18.			
	R46	LEAMAN, D.W. <i>et al.</i> "Targeted therapy of respiratory syncytial virus in african green monkeys by intranasally administered 2-5A antisense" <i>Virology</i> , 2002, pp. 70-77, Vol. 292.			
	R47	MATSUSE, H. <i>et al.</i> "Recurrent respiratory syncytial virus infections in allergen-sensitized mice lead to persistent airway inflammation and hyperresponsiveness" <i>J. Immunol.</i> , 2000, pp. 6583-6592, Vol. 164.			
	R48	MOHAPATRA, S.S. "Mucosal gene expression vaccine: a novel vaccine strategy for respiratory syncytial virus" <i>Pediatr. Infect. Dis. J.</i> , 2003, pp. S100-S104, Vol. 22, No. 2.			
	R49	MURPHY, B.R. <i>et al.</i> "Live-attenuated virus vaccines for respiratory syncytial and parainfluenza viruses: applications of reverse genetics" <i>J. Clin. Invest.</i> , 2002, pp. 21-27, Vol. 110, No. 1.			
	R50	LAZAR, I. <i>et al.</i> "Human metapneumovirus and severity of respiratory syncytial virus disease" 2004, pp. 1318-1320, Vol. 10, No. 7, NCBI accession no. M74568.			
	R51	DEPLAMCHE, M. <i>et al.</i> " <i>In vivo</i> evidence for quasispecies distributions in the bovine respiratory syncytial virus genome" 2007, pp. 1260-1265, Vol. 88, NCBI accession no. NC_001989.			
	R52	PAN, W. <i>et al.</i> "Isolation of virus-neutralizing RNAs from a large pool of random sequences" <i>Proc. Natl. Acad. Sci. USA</i> , 1995, 92:11509-11513.			

Examiner Signature	Date Considered
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			Application Number	10/581,580
			Filing Date	June 2, 2006
			First Named Inventor	Shyam S. Mohapatra
			Group Art Unit	1648
			Examiner Name	Myron G. Hill
			Attorney Docket Number	USF-208TCXC1
Sheet	8	of	9	

**NON PATENT LITERATURE DOCUMENTS**

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	R53	REICH, S.J. <i>et al.</i> "Small interfering RNA (siRNA) targeting VEGF effectively inhibits ocular neovascularization in a mouse model" <i>Mol. Vis.</i> , 2003, pp. 210-216, Vol. 9.	
	R54	SCHLENDER, J. <i>et al.</i> "Bovine respiratory syncytial virus nonstructural proteins NS1 and NS2 cooperatively antagonize alpha/beta interferon-induced antiviral response" <i>J. Virol.</i> , 2000, pp. 8234-8242, Vol. 74, No. 18.	
	R55	SOUTSCHEK, J. <i>et al.</i> "Therapeutic silencing of an endogenous gene by systemic administration of modified siRNAs" <i>Nature</i> , 2004, pp. 173-178, Vol. 432.	
	R56	SPANN, K.M. <i>et al.</i> "Suppression of the induction of alpha, beta, and gamma interferons by the NS1 and NS2 proteins of human respiratory syncytial virus in human epithelial cells and macrophages" <i>J. Virol.</i> , 2004, pp. 4363-4369, Vol. 78, No. 8.	
	R57	STEIN, C.A. "The experimental use of antisense oligonucleotides: a guide for the perplexed" <i>J. Clin. Invest.</i> , 2001, 108:641-644.	
	R58	TENG, M.N. <i>et al.</i> "Altered growth characteristics of recombinant respiratory syncytial viruses which do not produce NS2 protein" <i>J. Virol.</i> , 1999, pp. 466-473, Vol. 73.	
	R59	TENG, M.N. <i>et al.</i> "Recombinant respiratory syncytial virus that does not express the NS1 or M2-2 protein is highly attenuated and immunogenic in chimpanzees" <i>J. Virol.</i> , 2000, pp. 9317-9321, Vol. 74, No. 19.	
	R60	ZHANG, W. <i>et al.</i> "Attenuation of dengue virus infection by adeno-associated virus-mediated siRNA delivery" <i>Genetic Vaccines Ther.</i> , 2004, pp. 8, Vol. 2.	
	R61	ZHANG, X. <i>et al.</i> "Small interfering RNA targeting heme oxygenase-1 enhances ischemia-reperfusion-induced lung apoptosis" <i>J. Biol. Chem.</i> , 2004, pp. 10677-10684, Vol. 279, No. 11.	
	R62	YU, J. <i>et al.</i> "RNA interference by expression of short-interfering RNAs and hairpin RNAs in mammalian cells" <i>PNAS</i> , 2002, pp. 6047-6052, Vol. 99, No. 9.	
	R63	ROMANO, G. <i>et al.</i> "Latest developments in gene transfer technology: Achievements, perspectives, and controversies over therapeutic applications" <i>Stem Cells</i> , 2000, pp. 19-39, Vol. 18.	
	R64	JESSIE, K. <i>et al.</i> "Localization of dengue virus in naturally infected human tissues, by immunohistochemistry and in situ hybridization" <i>The Journal of Infectious Diseases</i> , 2004, pp. 1411-1418, Vol. 189.	
	R65	ROSENBERG, L. E. <i>et al.</i> "Gene therapist, heal thyself" <i>Science</i> , 2000, pp. 1751, Vol. 287.	

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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**Complete if Known**

Application Number	10/581,580
Filing Date	June 2, 2006
First Named Inventor	Shyam S. Mohapatra
Group Art Unit	1648
Examiner Name	Myron G. Hill
Attorney Docket Number	USF-208TCXC1

Sheet	9	of	9
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	R66	RAVIPRAKASH, K. <i>et al.</i> "Inhibition of dengue virus by novel, modified antisense oligonucleotides" <i>Journal of Virology</i> , 1995, pp. 69-74, Vol. 69, No. 1.	
	R67	SOMIA, N. <i>et al.</i> "Gene therapy: Trials and tribulations" <i>Nature Reviews</i> , 2000, pp. 91-99, Vol. 1.	
	R68	ANDERSON, W.F. "Human gene therapy" <i>Nature</i> , 1998, pp. 25-30, Vol. 392.	
	R69	VERMA, I.M. <i>et al.</i> "Gene therapy-promises, problems and prospects" <i>Nature</i> , 1997, pp. 239-242, Vol. 389.	
	R70	CAPLEN, N. "RNAi as a gene therapy approach" <i>Expert Opin. Biol. Ther.</i> , 2003, pp. 575-586, Vol. 3, No. 4.	
	R71	PADDISON, P.J. <i>et al.</i> "Stable suppression of gene expression by RNAi in mammalian cells" <i>PNAS</i> , 2002, pp. 1443-1448, Vol. 99, No. 3.	
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